

# KAJIAN PENGARUH PIX A RUT PADA PEMBUATAN MEMBRAN MIKROFILTRASI (*POROUS MEMBRANE*) DARI KHITOSAN

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## ABSTRACT

*Membrane filtration is a process of material separation that is widely used in industry and laboratory scales. The aims of the research are; to produce chitosan membranes by using crustacea waste, to identify characteristics of chitosan membranes and analyze the influence of solvent and chitosan concentrations to the membranes. The chitosan membrane that has the highest water flux of 903 l/m<sup>2</sup>.hr was made from citric acid solvent and chitosan concentration of 1 %. The highest albumin flux of 557 l/m<sup>2</sup>.hr was reached using membrane from acetic acid solvent and chitosan concentration of 1 % The highest flux of 617 l/m<sup>2</sup>.hr for glucose solution was reached using membrane from citric acid solvent and chitosan concentration of 1% and the highest flux of 166 l/m<sup>2</sup>.hr for starch suspension was reached using membrane from citric acid solvent and chitosan concentration of 5%. The value of chitosan membrane rejection was varied. The highest albumin rejection value was 17,21%, which was reached using membrane from citric acid solvent and chitosan concentration of 7%. The highest glucose rejection value was 16,26%, which was reached using membrane from acetic acid solvent and chitosan concentration of 7%. The highest starch rejection value was 29,00%, which was reached using membrane from acetic acid solvent and chitosan concentration of 7%. The highest values of resistance observed for albumin, glucose, and starch solutions were 3.05x 10<sup>-8</sup> m' (membrane with formic acid solvent and chitosan concentration of 7%); 4,29x10<sup>-8</sup> m' (membrane with acetic acid solvent and chitosan concentration of 7%) and 2,31x10<sup>-8</sup> m' (membrane with formic acid solvent and chitosan concentration of 7%), respectively. The different concentration of chitosan gave significant influence on the values of flux, rejection and resistance*

*Key words : membrane, chitosan, flux, rejection, resistance, solvent and concentration.*